REMARKS

Claims 1-12 are pending herein.

The indication of allowable subject matter in claims 3-5 and 8-10 is acknowledged.

The remaining claims have been rejected under §102(e) as anticipated by the Howard U.S. patent No. 6,683,884 in view of the Chow et al U.S. patent No. 6,438,134. Reconsideration of this rejection is courteously requested.

Applicant courteously contends that Howard is represents non-analogous art. Specifically, Howard uses round robin scheduling (see column 5 lines 61-67, and column 6 lines 1-15). The scheduler goes through the queues in a list, one by one, and as long as queue i and its associated counters meet the requirements for transmission, then a packet will be transmitted from i. And then i is incremented by 1 until all the queues have been looked at, and then the process begins anew from queue 0.

Howard, whether standing alone or in combination with other references, does not provide a weighted fair queueing (WFQ) emulative scheduler based on servicing the most shortchanged queue at any given time as in the claimed invention. The only manner in which Howard can be made applicable to the claimed invention would be by replacing the scheduler inside Howard. This is not appropriate since it is the scheduler that applicant is claiming.

Chow seeks to service the most shortchanged queue, as do applicants. However, the claimed invention is for a particular **method** for emulating WFQ, and Chow's method is mathematically different from the claimed method, as is made clear by comparing Chow's equations (5) and (6) in column 9 with method steps b and c of parent claim 1. Chow adds the reciprocal of the weight to the counter upon packet transmission, while in the claimed invention, the packet length is added (claim 1, paragraph b). Chow never subtracts from the counters, while

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in claim 1, the weights are subtracted based on a timer trigger (paragraph c). Thus Chow's algorithm is completely different.

Applicant contends that the claimed algorithm cannot be derived from Chow's (or a combination of his and Howard's) in any obvious way. Chow's algorithm cannot be substituted for that of the claimed invention without significant consequences, because Chow's fixed-cell-size (i.e. ATM) environment renders his algorithm unusable for Ethernet. Packet length is a critical component of bandwidth apportionment in a variable-packet-size environment. Chow's algorithm does not consider packet size during calculation (again see equations (5) and (6)). No obvious adjustment to Chow's algorithm (either alone or in combination with Howard's) can account for variable packet sizes, without introducing multiplication/division.

Classical WFQ uses multiplication/division to account for variable packet sizes during bandwidth partitioning. But this can be so costly as to be unimplementable in hardware. Chow does not tackle this problem because he doesn't need to do so for ATM. Therefore, tackling this problem in an implementable way cannot be derived either from classical WFQ or from Chow's patent. Howard does handle variable packet sizes, but only because he uses a round robin scheduler, which is an inferior scheduling technique that is known to introduce jitter. In round robin scheduling, variable packet size can be handled easily. In emulated WFQ scheduling, handling variable packet size has classically been a difficult problem for implementers, which is why, in an Ethernet environment, designers have typically used inferior round robin scheduling. An implementable way of combining variable packet size with ideal scheduling cannot be derived in any obvious way from a combination of Chow, Howard, and/or WFQ as described in academia.

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There are other differences between Chow and the claimed invention. By only adding to the counters, Chow introduces an implementation limitation related to counter wraparound. The claimed invention avoids this limitation with the time-triggered subtraction of queue weights (method step c of claim 1). In addition, Chow's equations require a knowledge of "real time" (again, see (5) and (6) in column 9), a requirement avoided in the claimed invention.

In conclusion, Applicant courteously contends that Chow and Howard are not properly combinable as Howard is from a non-analogous art. Howard teaches employing round robin techniques while Chow does not teach updating counters in a variable packet length packet switching environment in such a way that the values of the counters vary with a distribution about zero which reduces the need to attend to counter rollovers without employing costly hardware division. Howard and Chow can not be combined because the technologies employed by Howard (round robin) and Chow (WFQ) are incompatible. A prima facie case of obviousness has not been established since the non-analogous prior art teaches away from the invention and can not be operationally combined to achieve the results of the claimed invention.

Allowance of claims 1-12 is courteously solicited.

Respectfully submitted,

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